

What is claimed is:

1 1. A machine-implemented method, comprising:
2 creating, within a global operating system environment provided by an operating
3 system, a non-global partition which serves to isolate processes running within that
4 partition from other non-global partitions within the global operating system
5 environment;
6 maintaining a file system for the non-global partition, the file system comprising
7 one or more mounts;
8 receiving a request from a process running within the non-global partition to view
9 information for mounts;
10 determining that the process is running within the non-global partition; and
11 providing to the process information for only those mounts that are within the file
12 system for the non-global partition.

1 2. The method of claim 1, wherein the file system for the non-global
2 partition is part of an overall file system maintained for the global operating system
3 environment, and wherein the overall file system comprises one or more other mounts
4 that are not within the file system for the non-global partition.

1 3. The method of claim 1, wherein maintaining comprises:
2 associating the one or more mounts with the non-global partition.

1 4. The method of claim 3, wherein the non-global partition has a mount data
2 tracking structure associated therewith, and wherein associating comprises:
3 adding entries corresponding to the one or more mounts to the mount data
4 tracking structure associated with the non-global partition.

1 5. The method of claim 4, wherein the mount data tracking structure
2 associated with the non-global partition comprises a linked list of mount entries.

1 6. The method of claim 4, wherein providing comprises:
2 accessing the mount data tracking structure associated with the non-global
3 partition; and
4 determining, based upon the mount data tracking structure associated with the
5 non-global partition, the one or more mounts within the file system for the non-global
6 partition.

1 7. The method of claim 1, wherein the file system for the non-global
2 partition has a root directory, and wherein providing comprises:
3 determining which mounts are within the file system for the non-global partition
4 by determining which mounts are under the root directory, or a subdirectory thereof.

1 8. The method of claim 1, wherein maintaining comprises:
2 establishing a root directory for the file system, and establishing the one or more
3 mounts under the root directory, or a subdirectory thereof.

1 9. The method of claim 1, wherein creating comprises assigning a unique
2 identifier to the non-global partition.

1 10. The method of claim 9, wherein determining comprises:
2 extracting, from a data structure associated with the process, a partition identifier;
3 and
4 using the partition identifier to determine the non-global partition.

1 11. The method of claim 1, wherein the file system for the non-global
2 partition has a root directory, and wherein providing comprises:
3 indicating to the process that the root directory is one of the one or more mounts.

1 12. The method of claim 1, wherein the file system for the non-global
2 partition has a root directory, wherein the root directory has an associated path, wherein
3 each of the one or more mounts is under the root directory, or a subdirectory thereof, and
4 wherein providing comprises:
5 showing, to the process, each of the one or mounts without including the path to
6 the root directory.

1 13. An apparatus, comprising:
2 a mechanism for creating, within a global operating system environment provided
3 by an operating system, a non-global partition which serves to isolate processes running

4 within that partition from other non-global partitions within the global operating system
5 environment;

6 a mechanism for maintaining a file system for the non-global partition, the file
7 system comprising one or more mounts;

8 a mechanism for receiving a request from a process running within the non-global
9 partition to view information for mounts;

10 a mechanism for determining that the process is running within the non-global
11 partition; and

12 a mechanism for providing to the process information for only those mounts that
13 are within the file system for the non-global partition.

1 14. The apparatus of claim 13, wherein the file system for the non-global
2 partition is part of an overall file system maintained for the global operating system
3 environment, and wherein the overall file system comprises one or more other mounts
4 that are not within the file system for the non-global partition.

1 15. The apparatus of claim 13, wherein the mechanism for maintaining
2 comprises:

3 a mechanism for associating the one or more mounts with the non-global
4 partition.

1 16. The apparatus of claim 15, wherein the non-global partition has a mount
2 data tracking structure associated therewith, and wherein the mechanism for associating
3 comprises:

4 a mechanism for adding entries corresponding to the one or more mounts to the
5 mount data tracking structure associated with the non-global partition.

1 17. The apparatus of claim 16, wherein the mount data tracking structure
2 associated with the non-global partition comprises a linked list of mount entries.

1 18. The apparatus of claim 16, wherein the mechanism for providing
2 comprises:

3 a mechanism for accessing the mount data tracking structure associated with the
4 non-global partition; and

5 a mechanism for determining, based upon the mount data tracking structure
6 associated with the non-global partition, the one or more mounts within the file system
7 for the non-global partition.

1 19. The apparatus of claim 13, wherein the file system for the non-global
2 partition has a root directory, and wherein the mechanism for providing comprises:
3 a mechanism for determining which mounts are within the file system for the non-
4 global partition by determining which mounts are under the root directory, or a
5 subdirectory thereof.

- 1 20. The apparatus of claim 13, wherein the mechanism for maintaining
- 2 comprises:
 - 3 a mechanism for establishing a root directory for the file system, and establishing
 - 4 the one or more mounts under the root directory, or a subdirectory thereof.
- 1 21. The apparatus of claim 13, wherein the mechanism for creating comprises
- 2 a mechanism for assigning a unique identifier to the non-global partition.
- 1 22. The apparatus of claim 21, wherein the mechanism for determining
- 2 comprises:
 - 3 a mechanism for extracting, from a data structure associated with the process, a
 - 4 partition identifier; and
 - 5 a mechanism for using the partition identifier to determine the non-global
 - 6 partition.
- 1 23. The apparatus of claim 13, wherein the file system for the non-global
- 2 partition has a root directory, and wherein the mechanism for providing comprises:
 - 3 a mechanism for indicating to the process that the root directory is one of the one
 - 4 or more mounts.
- 1 24. The apparatus of claim 13, wherein the file system for the non-global
- 2 partition has a root directory, wherein the root directory has an associated path, wherein

3 each of the one or more mounts is under the root directory, or a subdirectory thereof, and
4 wherein the mechanism for providing comprises:
5 a mechanism for showing, to the process, each of the one or mounts without
6 including the path to the root directory.

1 25. A machine-readable medium, comprising:
2 instructions for causing one or more processors to create, within a global
3 operating system environment provided by an operating system, a non-global partition
4 which serves to isolate processes running within that partition from other non-global
5 partitions within the global operating system environment;
6 instructions for causing one or more processors to maintain a file system for the
7 non-global partition, the file system comprising one or more mounts;
8 instructions for causing one or more processors to receive a request from a
9 process running within the non-global partition to view information for mounts;
10 instructions for causing one or more processors to determine that the process is
11 running within the non-global partition; and
12 instructions for causing one or more processors to provide to the process
13 information for only those mounts that are within the file system for the non-global
14 partition.

1 26. The machine-readable medium of claim 25, wherein the file system for the
2 non-global partition is part of an overall file system maintained for the global operating

3 system environment, and wherein the overall file system comprises one or more other
4 mounts that are not within the file system for the non-global partition.

1 27. The machine-readable medium of claim 25, wherein the instructions for
2 causing one or more processors to maintain comprises:

3 instructions for causing one or more processors to associate the one or more
4 mounts with the non-global partition.

1 28. The machine-readable medium of claim 27, wherein the non-global
2 partition has a mount data tracking structure associated therewith, and wherein the
3 instructions for causing one or more processors to associate comprises:

4 instructions for causing one or more processors to add entries corresponding to
5 the one or more mounts to the mount data tracking structure associated with the non-
6 global partition.

1 29. The machine-readable medium of claim 28, wherein the mount data
2 tracking structure associated with the non-global partition comprises a linked list of
3 mount entries.

1 30. The machine-readable medium of claim 28, wherein the instructions for
2 causing one or more processors to provide comprises:
3 instructions for causing one or more processors to access the mount data tracking
4 structure associated with the non-global partition; and

5 instructions for causing one or more processors to determine, based upon the
6 mount data tracking structure associated with the non-global partition, the one or more
7 mounts within the file system for the non-global partition.

1 31. The machine-readable medium of claim 25, wherein the file system for the
2 non-global partition has a root directory, and wherein the instructions for causing one or
3 more processors to provide comprises:

4 instructions for causing one or more processors to determine which mounts are
5 within the file system for the non-global partition by determining which mounts are under
6 the root directory, or a subdirectory thereof.

1 32. The machine-readable medium of claim 25, wherein the instructions for
2 causing one or more processors to maintain comprises:

3 instructions for causing one or more processors to establish a root directory for
4 the file system, and to establish the one or more mounts under the root directory, or a
5 subdirectory thereof.

1 33. The machine-readable medium of claim 25, wherein the instructions for
2 causing one or more processors to create comprises instructions for causing one or more
3 processors to assign a unique identifier to the non-global partition.

1 34. The machine-readable medium of claim 33, wherein the instructions for
2 causing one or more processors to determine comprises:

3 instructions for causing one or more processors to extract, from a data structure
4 associated with the process, a partition identifier; and
5 instructions for causing one or more processors to use the partition identifier to
6 determine the non-global partition.

1 35. The machine-readable medium of claim 25, wherein the file system for the
2 non-global partition has a root directory, and wherein the instructions for causing one or
3 more processors to provide comprises:
4 instructions for causing one or more processors to indicate to the process that the
5 root directory is one of the one or more mounts.

1 36. The machine-readable medium of claim 25, wherein the file system for the
2 non-global partition has a root directory, wherein the root directory has an associated
3 path, wherein each of the one or more mounts is under the root directory, or a
4 subdirectory thereof, and wherein the instructions for causing one or more processors to
5 provide comprises:
6 instructions for causing one or more processors to show, to the process, each of
7 the one or mounts without including the path to the root directory.